MPS
Medical Parts Source

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BRODA
REPAIR AND MAINTENANCE MANUAL

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Suggested Tool Kit

A variety of fasteners are used in the assembly of Broda's products. The majority of these are ¼"or 5/16" diameter bolts and nuts. However some of the fasteners used are supplied with the components which are purchased offshore hence some of these are metric.

Listed below are the most common tools used in the assembly of our chairs, from time to time you may be required to do repairs or modifications in the field. Therefore we suggest the following items to make your job easier.

Qty.	Item	Where Used
2	7/16" combination wrenches	Nuts & bolts used to secure seat to base frame, adjusting seat height on the Pedal Chair.
2	½" combination wrenches	Nuts & bolts used to secure gas cylinders, adjusting arm heights (all models).
1	¾" combination wrench	Nut used to Secure 5" casters on the front of Pedal and Basic chairs.
1	13mm combination wrench	Bolts used to secure rear casters in the Elite Chair line.
1	17mm combination wrench	Adjustments to lock nut on the stem of the gas cylinders.
1	5/8" combination wrench	Axle bolt & lock nut on wheelchair models.
1	10mm combination wrench	Nuts used to secure wheel locks on wheelchair models.
1	#2 Robertson screwdriver (red)	Screws which fasten cable handles, screw in the footrest rod.
1	#3 Robertson screwdriver (black)	Screws which secure the armrests to chair.
1	3mm Allen wrench	Set screw used to secure pedals on the Elite Chair line and on the housing bolts of the 4" Solus caster.
1	5/32" Allen wrench	Set screw used in conjunction with arm heights.
1	Heat gun	Use for heating vinyl straps during strap replacement or reversal.
1	Hand Rivet Gun	Used for installation of vinyl straps.

List of Commonly Replaced Parts

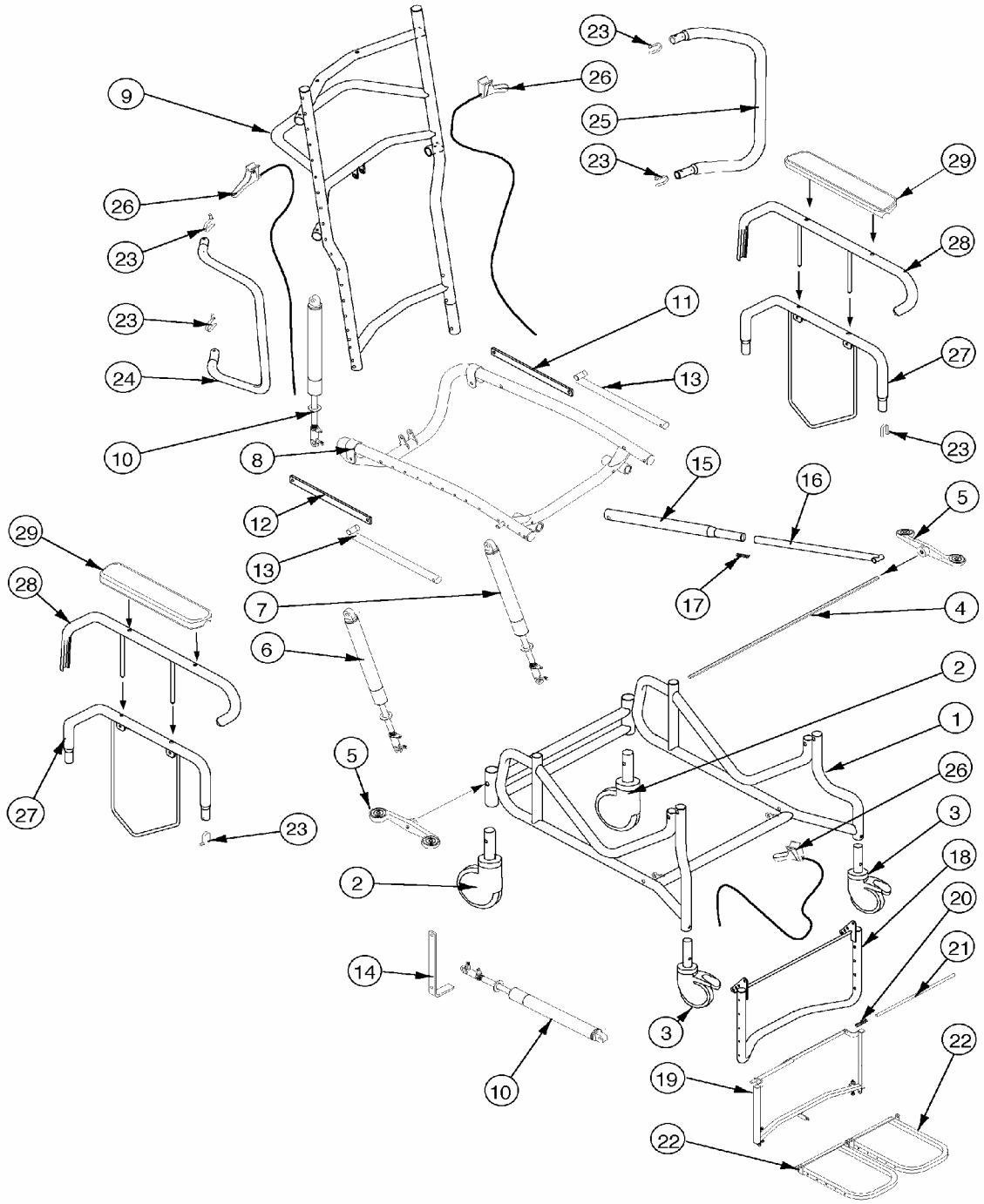
Part No.	Description
ACS A-3	black urethane plastic arm rests
PRT-CABLE	control cable for gas cylinder release mechanism.
PRT-CABLEACT	actuator for gas cylinder release mechanism.
PRT-CABLEHANDLE	control handle for gas cylinder release mechanism.
PRT-CABLERELEAS	complete release mechanism for gas cylinders consisting of the prt-cable, prt-cableact, and prt-cablereleas.
PRT-CASTER4”	four inch white solus caster.
PRT-CASTER5”	five inch grey total lock caster.
PRT-CASTER5” NL	five inch grey non-locking caster.
PRT-CASTERFIX5”	five inch grey fixed caster with brake.
PRT-CASTER5” DL	five inch grey directional locking caster.
PRT-CASTER6” SL	six inch white single-directional locking caster.
PRT-TIRE 5”	five inch grey tire for five inch casters.
PRT-MDLC BOLTS	MDLC mounting bolts 8mm x 10mm metric.
PRT-MDLC6”	six inch grey multi-directional locking caster.
PRT-MDLC8”	eight inch grey multi-directional locking caster.
PRT-PAB4	300N locking gas cylinder with a nine inch long body
PRT-PAB5	300N locking gas cylinder with an eleven inch long body
PRT-PAB5 NL	300N non-locking gas cylinder with an eleven inch long body
PRT-STRAP	vinyl straps used on chairs. you must specify the color, seat width of the chair, and location of the strap on the chair when ordering.

Note: Please include the model number and serial number of the chair whenever you are ordering parts. These can be found on a sticker that is attached to the cross member on the back of the seat back.

Broda Seating 785 Parts Schematic Drawing

(For Chairs Built After September 8,2000)

June 1,2001



Broda Seating 785 Parts Schematic Legend

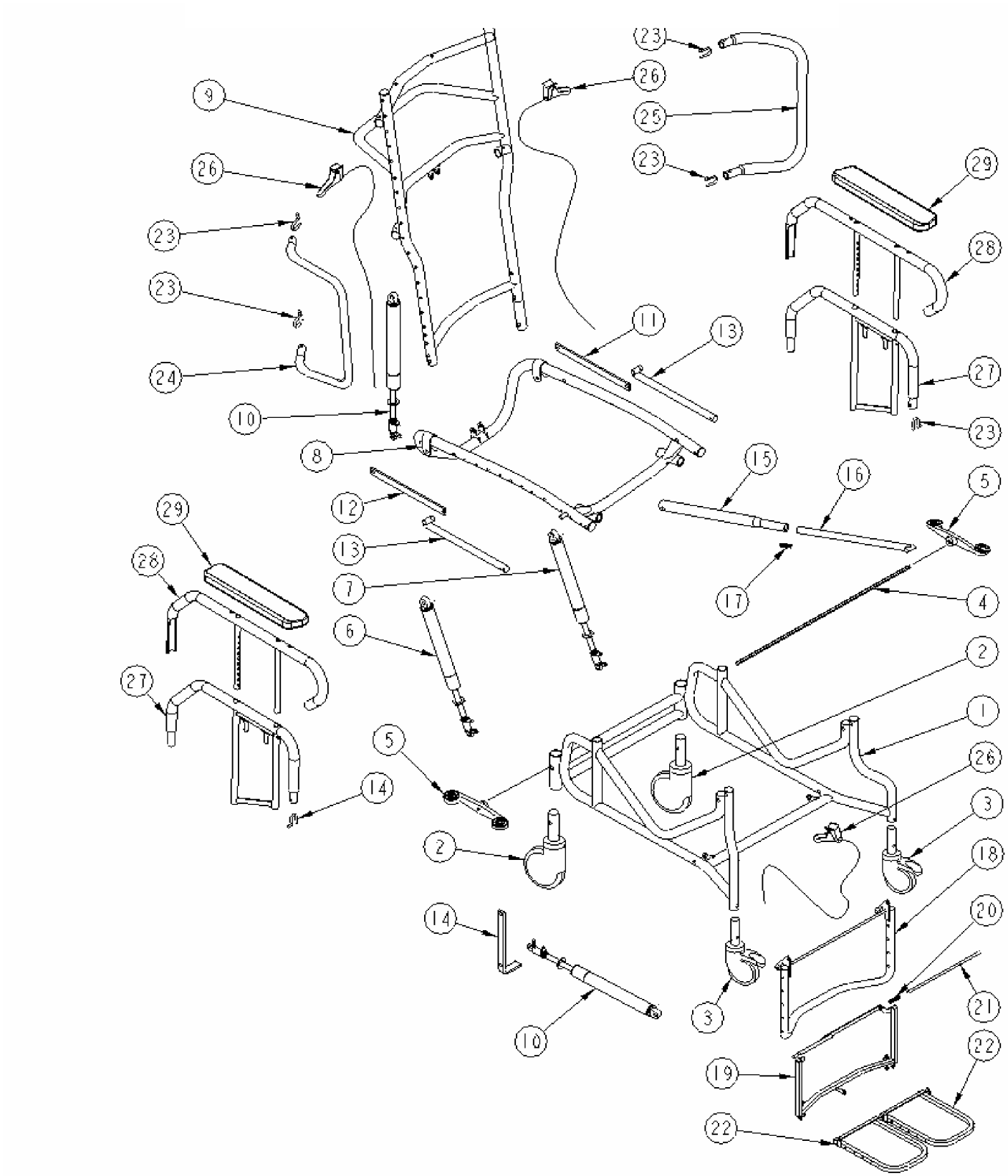
(For chairs built after Sept 8, 2000)

#	Description	Part Number
1.	**Base for Model 785**	FCP-18/20-785-B500
2.	6” Tente Single Directional Locking Rear Caster	PRT-CASTERT6”
3.	5” Total Lock Plastic Tente Caster	PRT-CASTER5” PT
4.	Control Rod for PRT-CASTER6” SL	FCP-18/20-HEXROD
5.	Control Pedal for PRT-CASTER6” SL	PRT-MDLCPEDAL
6.	Gas Spring assembly Non Locking with Head	PRT-PAB4NL
7.	Gas Spring assembly Locking with Release Head	PRT-PAB4
8.	Seat for Model 785	FPP-18/20-785 ST00
9.	Back for Reclining Models	FCP-18/20-BACK
10.	Gas Spring assembly Locking with Release Head	PRT-PAB5
11.	Legrest Ext. Bar 785 Model (Black)	FPP-785-LEGEXBR
12.	Legrest Ext. Bar 785 Model (Chrome)	FCP-785-LEGEXBR
13.	Legrest Attachment Rod for 17” Seat Depth	FSP-LGRTROD17
14.	J Lever for 785 Legrest	FCP-JLEVER
15.	Legrest Elevation Tube 785 Model	FPP-785-LEGEXTU
16.	Legrest Elevation Rod for 17” Seat Depth	FCP-LGRTELV17
17.	¾” x 3” Green Die Spring	ASFASANCDIESPRO
18.	Vertical Legrest	FCP-18/20-LGRT14
19	Upper Half Double Flip Down Footrest	FCP-18/20-DFUPPER
20	Compression Spring for Footrest Rod	ASFASPRE0000003
21	Footrest Rod	FCP-18/20 FTRTROD
22	Lower Half Double Flip Down Footrest	FCP-18/20 DFLOWER
23	Retaining Spring for Removable Arms & Wings	ASFASPRO000000
24	Removable Wing Right	FCP-W-IR-RH
25	Removable Wing Left	FCP-W-IR-LH
26	Cable assembly consisting of: Cable, Handle, Mounting Screw	PRT-CABLEASSEMBLY
27	Lower Half of Adjustable Removable Arm	FCP-ARMBOTTOM78
28	Upper Half of Adjustable Removable Arm	FCP-ARMTOP785
29.	Black Armrest comes with Mounting Screws	ACS A-3

Broda Seating 785 Parts Schematic Drawing

(For Chairs Built After September 8,2000)

February 2004



Broda Seating 785 Parts Schematic Legend

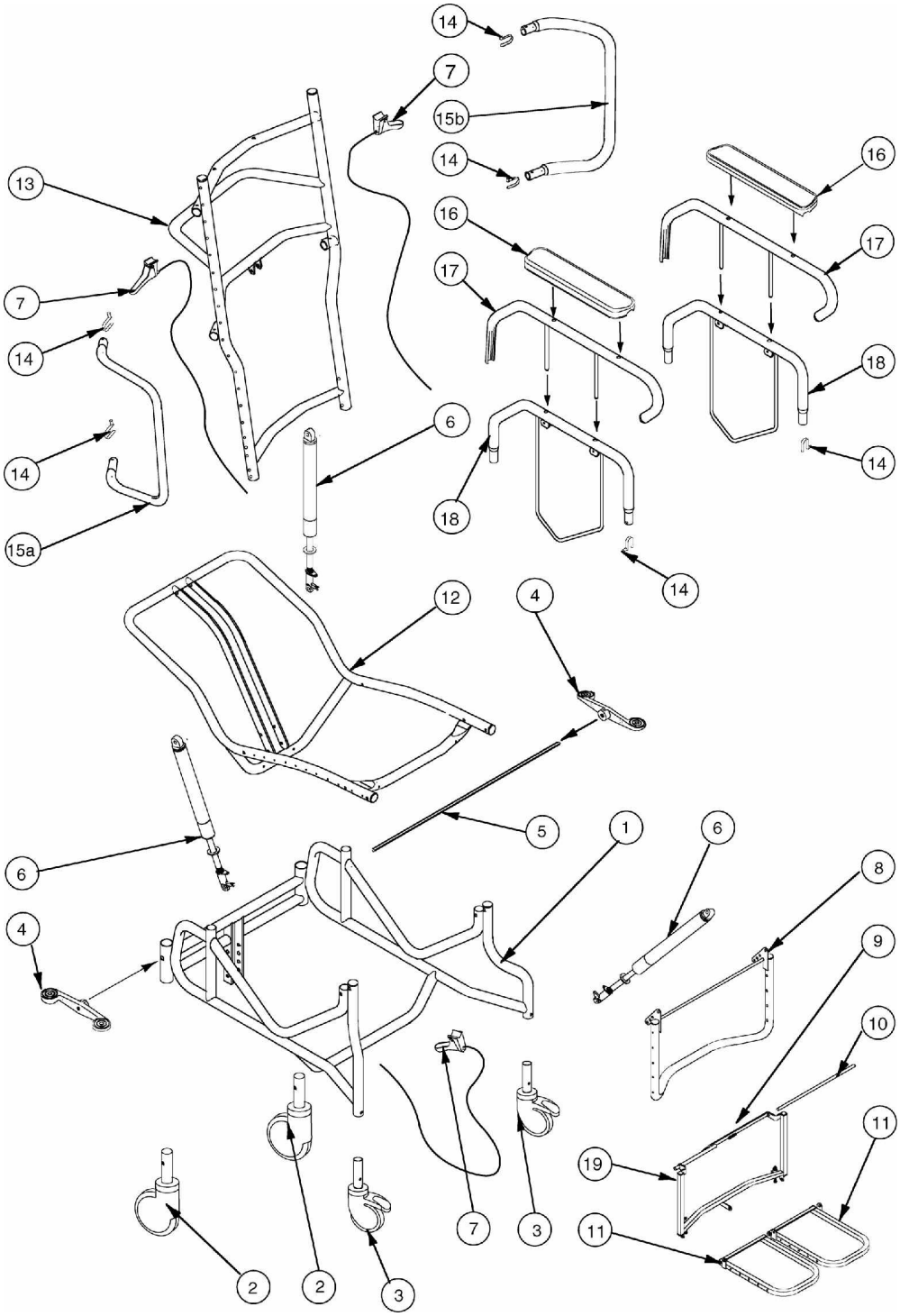
(For Chairs Built After September 8,2000)

February 2004

#	Description	Part Number
1.	**Base for Model 785**	FCP-18/20-785-B500
2.	15 cm Tente Single Directional Locking Rear Caster	PRT-CASTERT6”
3.	12.5 cm Total Lock Plastic Tente Caster	PRT-CASTER5” PT
4.	Control Rod for PRT-CASTER6” SL	FCP-18/20-HEXROD
5.	Control Pedal for PRT-CASTER6” SL	PRT-MDLCPEDAL
6.	Gas Spring assembly Non Locking with Head	PRT-PAB4NL
7.	Gas Spring assembly Locking with Release Head	PRT-PAB4
8.	Seat for Model 785	FPP-18/20-785 ST00
9.	Back for Reclining Models	FCP-18/20-BACK
10.	Gas Spring assembly Locking with Release Head	PRT-PAB5
11.	Legrest Ext. Bar 785 Model (Black)	FPP-785-LEGEXBR
12.	Legrest Ext. Bar 785 Model (Chrome)	FCP-785-LEGEXBR
13.	Legrest Attachment Rod for 43 cm Seat Depth	FSP-LGRTROD17
14.	J Lever for 785 Legrest	FCP-JLEVER
15.	Legrest Elevation Tube 785 Model	FPP-785-LEGEXTU
16.	Legrest Elevation Rod for 43 cm Seat Depth	FCP-LGRTELV17
17.	2 cm x 7.5 cm Green Die Spring	ASFASANCDIESPRO
18.	Vertical Legrest	FCP-18/20-LGRT14
19	Upper Half Double Flip Down Footrest	FCP-18/20-DFUPPER
20	Compression Spring for Footrest Rod	ASFASPRE0000003
21	Footrest Rod	FCP-18/20 FTRTROD
22	Lower Half Double Flip Down Footrest	FCP-18/20 DFLOWER
23	Retaining Spring for Removable Arms & Wings	ASFASPRO000000
24	Removable Wing Right	FCP-W-IR-RH
25	Removable Wing Left	FCP-W-IR-LH
26	Cable assembly consisting of: Cable, Handle, Mounting Screw	PRT-CABLEASSEMBLY
27	Lower Half of Adjustable Removable Arm	FCP-ARMBOTTOM78
28	Upper Half of Adjustable Removable Arm	FCP-ARMTOP785
29.	Black Armrest comes with Mounting Screws	ACS A-3

Broda Seating 35V Parts Schematic Drawing

January 15,2001



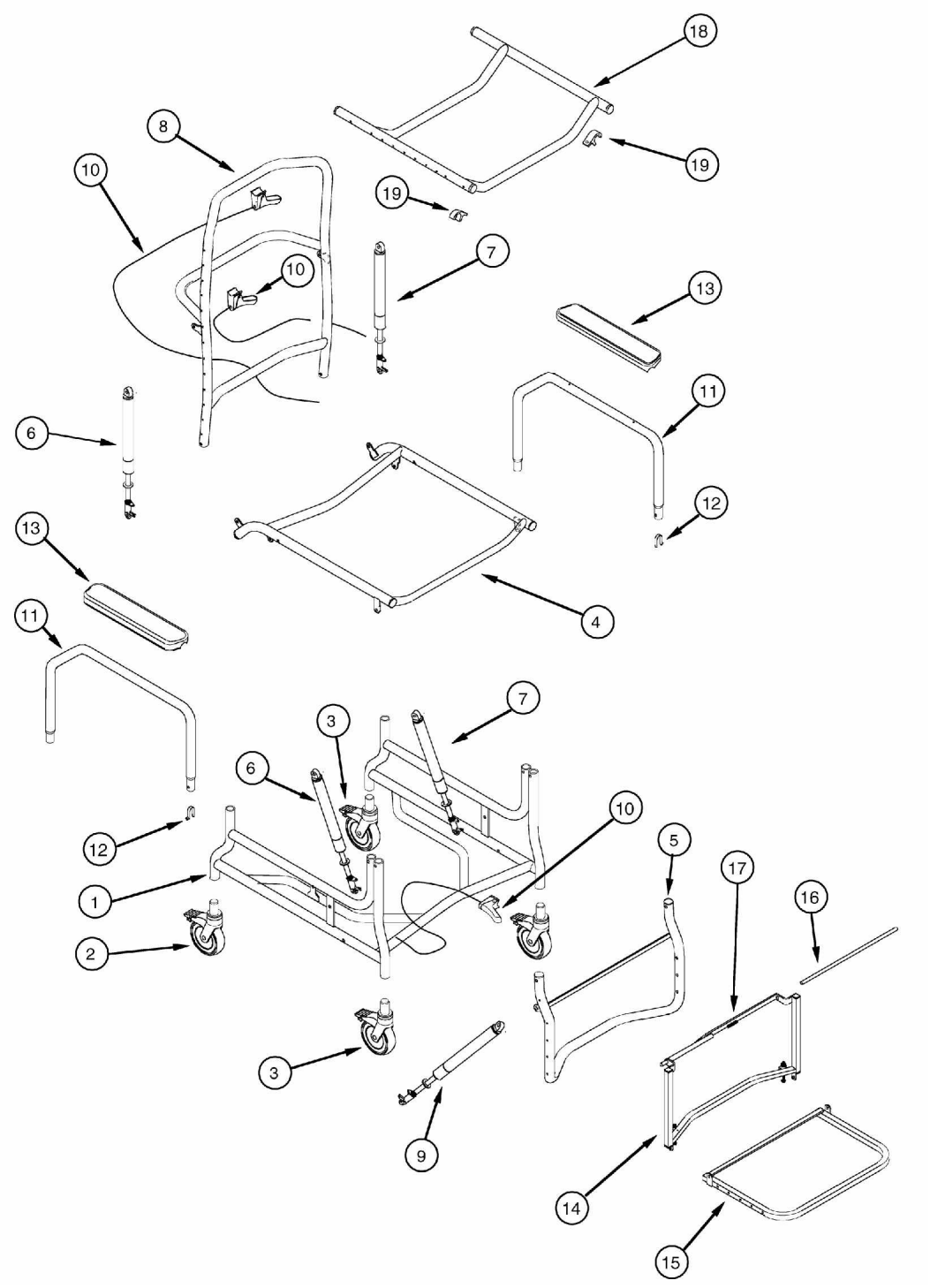
Broda Seating 35V Parts Schematic Legend

January 15, 2001

#	Description	Part Number
1.	**Elite Base**	FCP-18/20-EL-BASE
2.	6” Tente Single Directional Locking Rear Caster	PRT-CASTERT6”
3.	5” Tente Total Lock Plastic Caster	PRT-CASTER5”PT
4.	Control Pedal for PRT-CASTER6”SL	PRT-MDLCPEDAL
5.	Control Rod for PRT-CASTER6”SL	FCP-18/20-HEXROD
6.	Gas Spring Assembly Locking Release head	PRT-PAB5
7.	Cable assembly consisting of cable, handle, mounting screw	PRT-CABLEASSEMBLY
8.	Vertical Legrest	FCP-18/20-LGRT14
9.	Compression Spring for Footrest Rod	ASFASPRE0000003
10.	Footrest Rod	FCP-18/20-FTRTROD
11.	Lower Half Split Footrest	FCP-18/20-DFLOWER
12.	Seat	FCP-18/20-EL-35ST
13.	Reclining Back	FCP-18/20-BACK
14.	Retaining Spring for Removable Arms/Wings	ASFASPRO000000
15a	Removable Wing Right	FCP-W-1R-RH
15b	Removable Wing Left	FCP-W-1R-LH
16.	Black Armrest c/w Mounting Screws	ACS A-3
17.	Upper Half of Adjustable Removable Arm	FCP-ARMTOP 785
18.	Lower Half of Adjustable Removable Arm	FCP-ARMBOTTOM78
19.	Upper Half Split Footrest	FCP-18/20-DFUPPER

Broda Seating CS 385 Parts Schematic Drawing

November 1, 2000

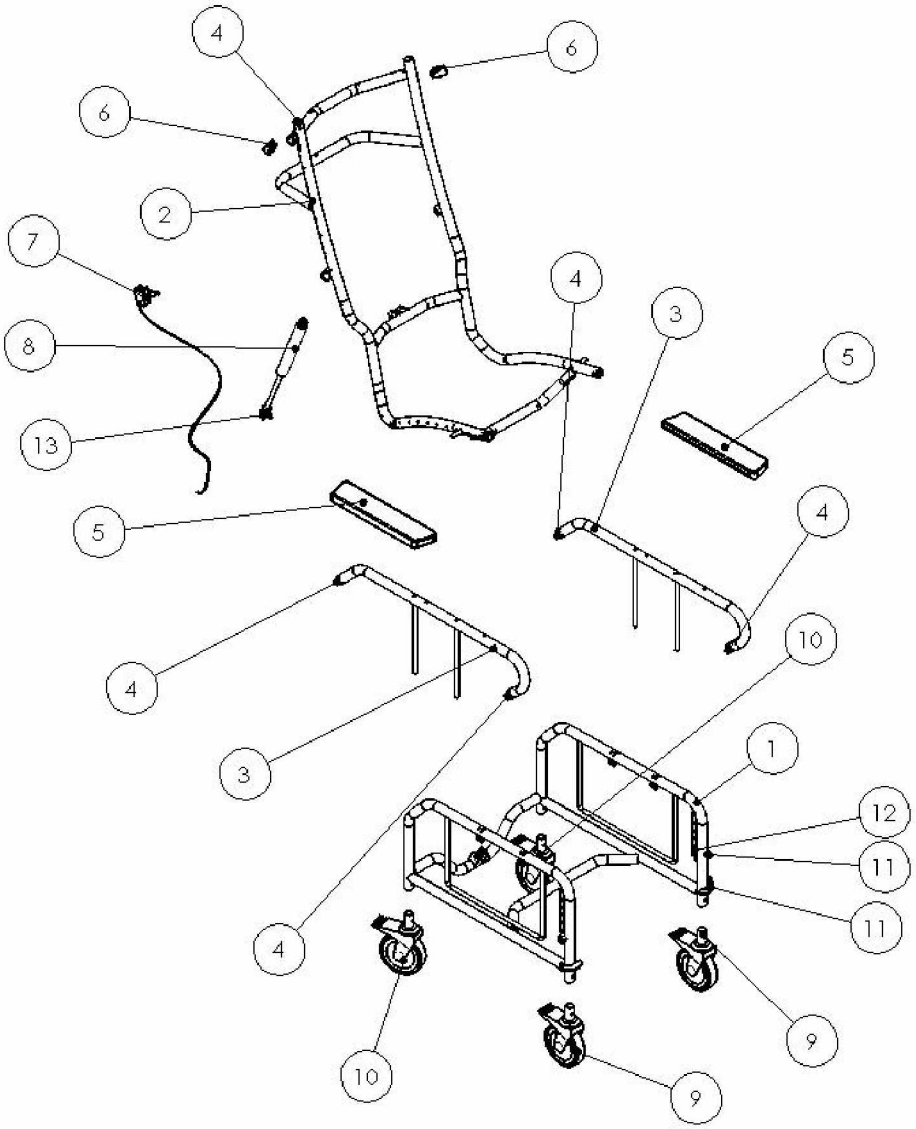


Broda Seating CS 385 Parts Schematic Legend

November 1, 2000

#	Description	Part Number
1.	**Base for commode/shower chair**	FPP-CS-BASE00
2.	5” plastic directional lock caster	CASTOR5”PD”
3.	5” plastic caster total lock	CASTOR5”PT”
4.	Seat mount for commode/shower chair	FPP-CS-ST-MNT00
5.	Legrest for commode/shower chair	FPP-CS-LGRT1400
6.	Gas spring assembly non locking with head	PAB4-NL
7.	Gas spring assembly locking with release head	PAB4
8.	Back for commode/shower chair	FPP-CS-BACK
9.	Gas spring assembly locking with release head	PAB5
10.	Cable assembly consisting of cable, handle, mounting screw	PRT-CABLEASSEMBLY
11.	Removable arm for commode/shower chair	FPP-CS-ARM00
12.	Retaining spring for removable arms	ASFASPRO0000000
13.	Black armrest c/w mounting screws	PRT-A-3
14.	Upper half commode/shower chair footrest	FPP-CS-SFUPPER0
15.	Lower half commode/ shower chair footrest	FPP-CS-SFLOWER0
16.	Rod for commode/shower chair footrest	FPP-CS-FTRTROD
17.	Compression spring for footrest rod	ASFASPRE0000003
18.	Shower seat for commode/shower chair	FPP-CS-ST-SHWRO
19.	Mounting clip for shower seat	PRT-SEATCLIP

Broda Seating 48 Parts Schematic



48 Parts Schematic Legend

#.	Description	Part Number
1	Frame base - pedal chair	200104000
2	Frame tilt seat	200204000
3	Frame arm top - basic/pedal	200505000
4	Plug inside 1" round black - plastic	430111000
5	Armrest	430402000
6	Plug with 1/4" pass hole - plastic	430113000
7	Cable handle assembly	600614000
8	Pab4 locking cylinder	600612000
9	5" total lock caster	430101000
10	5" fixed caster	430103000
11	Bracket for Swing Away Footrest	n/a
12	Height Adjustment Plate - Pedal chair	n/a
13	Actuator for cylinder	430203000

Cables and Handles

Maintenance

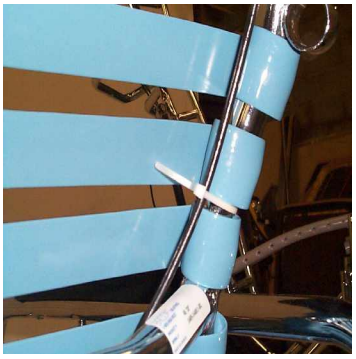
The cables and handles do not require any maintenance.

Removal and Installation

The cable is used in conjunction with a cable handle and an actuator to control the function of the gas cylinder. The cable and handle are one unit. On the actuator end, the cable hooks into the lever that depresses the control pin on the cylinder. The cable housing either clips into the actuator housing or is held in place by a cable tie.

Steps:

1. Unclip the cable from the actuator.



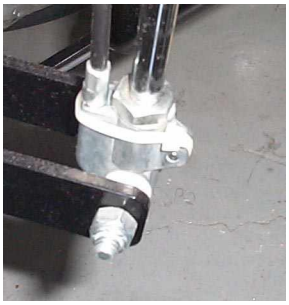
2. Cut the cable ties that secure the cable to the frame of the chair (carefully note the location of the cable ties and how the cable is threaded around the frame of the chair.)

3. Remove the mounting screw

4. Remount the new handle assembly to the frame of the chair using the screw removed in step 3.

5. Thread the new cable around the frame of the chair the same as the old one and install new cable ties where necessary.

6. Hook the end of the cable into the lever in the actuator and clip the cable housing into the actuator housing.



7. Install a new cable tie around the end of the cable housing and the actuator, if the chair was originally equipped with one.

Note: This procedure may vary on earlier models.

CASTERS AND WHEELS

Current Casters

Part Number	Description	Where Used	When
ASWHETENPLASTL	Tente 5" Plastic Total Lock Caster, light grey pedal, grey casing Rolls and swivels when unlocked Swivel and rolling lock when pedal is depressed	Standard on the front of Models: 785 and Elite Basic Pedal (500 Series) Pedal (standard) 385 CS	From July 1, 2001 From May 7, 2001 From Sept 20, 2001 From Nov 21, 2001 From Oct. 2000
ASWHETENTPLASFX	Tente 5" Fixed Brake Caster, light grey pedal, grey casing. Rolls and doesn't swivel - the wheel locks when pedal is depressed	Standard on rear of Pedal chairs	From Nov 21, 2001
ASWHETENPLASDL	Tente 5" Plastic Directional Locking Caster, dark grey pedal, grey casing Rolls and swivels - has directional (swivel) lock when the pedal is depressed	Standard on the right rear of: Basic Chairs 385 CS	From May 7, 2001 From Oct. 2000
ASWHETENSDLC000	Tente 6" Single Directional Locking Caster, grey casing Has a three position pedal – total lock, directional lock, swivel	Standard on the rear of all Elite Chairs - 785, 75V, 85V, and 35V	From July 1, 2001
PRT-WHEEL20" (20" Mag Style Wheels)	Skyway 20" Mag Style wheel with handrim and patient operated brakes	Standard on 785, and 48 available on request on all other models	From inception
PRT-WHEEL24" (24" Mag Style Wheels)	Gendron 24" Mag Style wheel with handrim and patient operated brakes	Standard on all 500/550 chairs, except 48's and 785's	From Oct. 18, 1999 (before that they were Skyway Mags)

CASTERS AND WHEELS

Non-Current Casters

Part Number	Description	Where Used	When
PRT-CASTER5" (Total lock Caster)	Colson 5" grey wheel, zinc plated, housing, black brake pedal Rolls and swivels when unlocked Swivel and rolling lock when pedal is depressed	Standard on the front and left rear of: Basic (30VT, 80V) And on the front of: 785 85V, 35V, 75V	 Prior to May 7, 2001 Prior to May 28, 1997 Prior to May 28, 1997
PRT-CASTER5" NL (Non Locking Caster)	Colson Grey wheel, zinc plated housing, no brake pedal Rolls and swivels- has no lock or brake of any type	Standard on the front of all Pedal chairs - 48, 48-500	Prior to Sept 20, 2001
PRT-CASTER5" DL (Directional Locking Caster)	Colson 5" grey wheel, zinc plated housing, blue pedal Rolls and swivels - has directional (swivel) lock when pedal is depressed	Standard on right rear of : Basic Chairs - 30VT & 80V	Prior to May 7, 2001
PRT-CASTERFIX5" (Fixed Caster)	Colson 5" grey wheel, zinc plated housing, black brake pedal Rolls and doesn't swivel- the wheel locks when the pedal is depressed	Standard on the rear of Pedal chairs -model 48	Prior to Nov. 21, 2001
PRT-CASTER5" SL (Total lock Solus Caster)	Colson 5" grey wheel, white or grey housing, grey brake pedal Rolls and swivels when unlocked Swivel and rolling lock when Pedal is depressed	Standard on the front of all Elite chairs including 500 series White Casing Grey Casing	May 15, 2000 to July 1, 2001 From May 15, 2000 to Sept. 27, 2000 From Sept. 28, 2000 to July 1 2001
PRT-CASTER6" SL (Single Directional Locking Caster)	Colson 6" grey wheel, white or grey housing, chrome brake pedal Has a three position pedal - total lock, directional lock, swivel	Standard on rear of all Elite chairs White Casing Grey Casing	 From May 28, 1998 To Sept 27, 200 From Sept 28, 2000 To July 1, 2001

Non Current Casters con't

Part Number	Description	Where Used	When
PRT-CASTER4" SL (Total Lock Solus Caster)	Colson 4" grey wheel, white casing and grey brake pedal Rolls and swivels when unlocked, swivel and rolling lock when pedal is depressed	Standard on the front of all Elite chairs	From Dec. 22, 1997 to May 15, 2000
PRT-WHEEL8" (Fixed wheel 8")	Colson 8" grey wheel with 5 piece step on brake Wheel does not swivel and has separate step on brake	Standard on Basic chairs	Prior to Feb 14, 1997
PRT-MDLCASTER6" (Multi-directional Caster)	Tente 6" grey wheel, chrome plate housing Has a three position pedal with total lock, directional lock, and swivel mode	Standard on the rear of Elite chairs	From Dec. 22, 1997 to May 28, 1998
PRT-MDLCASTER8" (Multi-directional Caster)	Tente 8" grey wheel, chrome plate housing Has a three position pedal with a total lock, directional lock, and a swivel mode.	Standard on the rear of all Elite chairs	Prior to Dec. 22, 1997

Current Casters

The current casters used on Broda chairs include the Tente 5” Plastic Total Lock Caster
Tente 5” Fixed Brake Caster
Tente 5” Plastic Directional Locking
Tente 6” Single Directional Locking

See page 17-19 for chair models in which each current caster is used, and dates for which they began.

Caster Removal and Installation Instructions:

For caster removal and installation, of non current casters, see instructions beginning on page 21 for Non-Current Casters.

For caster removal and installation of Tente 6” Single Directional Locking Casters (applies to current and non current, see page 42)

Repair and Maintenance:

There is limited repair and maintenance that can be done with Tente casters.
Tente casters do not have individual parts that can be replaced. The whole caster must be replaced.

Chairs with non-current 4” front Colson casters that need these casters replaced, must purchase a pair of 4” Tente casters, to ensure the chair is level. If only the Colson tire or brake pedal needs to replaced, these individual parts are available.
Chairs with the current Tente casters, that need these casters replaced, may purchase casters individually.
See pages 17-19 for a list of all current and non-current casters, and date ranges in which they were used.

<u>Non Current Casters</u>: **5” TotalLock Caster**

Maintenance and Repair:

These casters are designed to be maintenance free. The bearings in these casters are permanently lubricated and should not require further lubrication. The brake and directional lock on these casters are not adjustable or repairable if they fail the caster must be replaced. The only repair that can be done to these casters is to change the wheel itself.

Caster Removal and Installation Instructions:

This Caster is mounted on to a stud along with a dust cap and is held in place by a 12 mm retaining nut (19 mm or ¾” wrench). The stud is inserted into the front leg of the chair and held in place by a ¼” X 1 ½” bolt through the front leg of the chair.

Steps:

1. Tip the chair forward so that the chair is lying on its front with the back wheels up in the air.

2. Remove the retaining nut that is located inside the caster housing above the tire.

3. Slide the old caster off of the mounting stud leaving the dust cap in place.

4. Make sure the dust cap is still in place and slide the new caster onto the mounting stud.

5. Reinstall and tighten the retaining nut.

Wheel Removal and Installation Instructions

Steps:

1. Tip the chair forward so that the chair is lying on its front with the back wheels up in the air.

2. Remove the nut from the axle bolt (2 x 14mm or 9/16” wrenches.)

3. Slide the axle bolt out of the caster housing.

4. Remove the old wheel from the caster housing.

5. Remove the thread guards from the old wheel.
6. Place the thread guards on the new wheel.

7. Insert the new wheel with the thread guards into the housing.

8. Insert the axle bolt into the caster housing.

9. Reinstall and tighten the axle bolt.

5” Non-Locking Caster

Maintenance and Repair:

These casters are designed to be maintenance free. The bearings in these casters are permanently lubricated and should not require further lubrication.

Caster Removal and Installation Instructions:

This Caster is mounted on to a stud along with a dust cap and two spacers this held in place by a 12 mm retaining nut (19 mm or ¾” wrench). The spacers are located between the dust cap and the caster and the caster and the retaining nut. The stud is inserted into the front leg of the chair and held in place by a ¼” X 1 ½” bolt through the front leg of the chair.

Steps:

1. Tip the chair forward so that the chair is lying on its front with the back wheels up in the air.

2. Remove the retaining nut that is located inside the caster housing above the tire.

3. Remove the lower spacer that is located between the retaining nut and the caster.

4. Slide the old caster off of the mounting stud leaving the dust cap and upper spacer in place.

5. Make sure the dust cap and upper spacer is still in place and slide the new caster onto the mounting stud.

6. Reinstall the lower spacer.

7. Reinstall and tighten the retaining nut.

Wheel Removal and Installation Instructions

Steps:

1. Tip the chair forward so that the chair is lying on its front with the back wheels up in the air

2. Remove the nut from the axle bolt (2 x 14mm or 9/16” wrenches).

3. Slide the axle bolt out of the caster housing.

4. Remove the old wheel from the caster housing.

5. Remove the thread guards from the old wheel.
6. Place the thread guards on the new wheel.

7. Insert the new wheel with the thread guards into the housing.

8. Insert the axle bolt into the caster housing.

9. Reinstall and tighten the axle bolt.

5” Directional-Lock Caster

Maintenance and Repair:

These casters are designed to be maintenance free. The bearings in these casters are permanently lubricated and should not require further lubrication. The Directional-locks on these casters are not adjustable or repairable if they fail the caster must be replaced. The only repair that can be done to these casters is to change the wheel itself.

Caster Removal and Installation Instructions:

This Caster has and integral mounting stud that is inserted into the right rear leg as viewed from the back of the chair and held in place by a ¼” X 1 ½” bolt through the right rear leg of the chair.

Steps:

1. Tip the chair forward so that the chair is lying on its front with the back wheels up in the air

2. Remove the nut from the ¼” bolt located on the right rear leg of the chair (as viewed from the back) just above the caster.

3. Remove the bolt from the right rear leg by sliding it out of the hole.

4. Pull the old caster out of the right rear leg of the chair.

5. Insert the new caster into the right rear leg of the chair being careful to make sure the bolt hole in the stud of the caster lines up with the bolt hole in the right rear leg of the chair.

6. Reinsert the bolt into the hole on the right rear leg of the caster.

7. Reinstall the nut onto the above bolt and tighten.

Wheel Removal and Installation Instructions

Steps:

1. Tip the chair forward so that the chair is lying on its front with the back wheels up in the air.

2. Remove the nut from the axle bolt (2 x 14mm or 9/16” wrenches).

3. Slide the axle bolt out of the caster housing.

4. Remove the old wheel from the caster housing.

5. Remove the thread guards from the old wheel.
6. Place the thread guards on the new wheel.

7. Insert the new wheel with the thread guards into the housing.

8. Insert the axle bolt into the caster housing.

9. Reinstall and tighten the axle bolt.

5” Fixed Caster

Maintenance and Repair:

These casters are designed to be maintenance free. The bearings in these casters are permanently lubricated and should not require further lubrication. The Brakes on these casters are not adjustable or repairable if they fail the caster must be replaced. The only repair that can be done to these casters is to change the wheel itself.

Caster Removal and Installation Instructions:

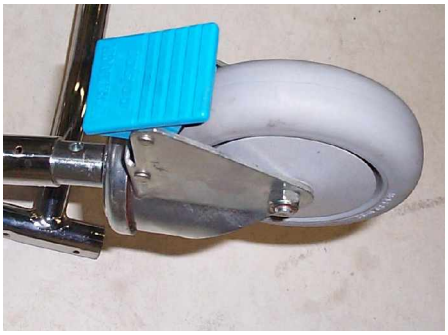
This Caster has and integral mounting stud that is inserted into the rear leg of the chair and held in place by a ¼” X 1 ½” bolt through the rear leg of the chair.

Steps:

1. Tip the chair forward so that the chair is lying on its front and the rear wheels are up in the air.

2. Remove the nut from the ¼” bolt located on the rear leg of the chair just above the caster.

3. Remove the bolt from the rear leg by sliding it out of the hole.



4. Pull the old caster out of the rear leg of the chair.

5. Insert the new caster into the rear leg of the chair being careful to make sure the bolt hole in the stud of the caster lines up with the bolt hole in the rear leg of the chair.

6. Reinsert the bolt into the hole on the rear leg of the caster.

7. Reinstall the nut onto the above bolt and tighten.

Wheel Removal and Installation Instructions

Steps:

1. Tip the chair forward so that the chair is lying on its front with the rear wheels up in the air.

2. Remove the nut from the axle bolt (2 x 14mm or 9/16” wrenches).

3. Slide the axle bolt out of the caster housing.

4. Remove the old wheel from the caster housing.

5. Remove the thread guards from the old wheel.
6. Place the thread guards on the new wheel.

7. Insert the new wheel with the thread guards into the housing.

8. Insert the axle bolt into the caster housing.

9. Reinstall and tighten the axle bolt.

4” TotalLock Solus Caster

Maintenance and Repair:

These casters are designed to be maintenance free. The bearings in these casters are permanently lubricated and should not require further lubrication. There are no adjustments on this caster and the only repair that can be done to them is to replace the brake pedal if it brakes.

Caster Removal and Installation Instructions:

This Caster has and integral mounting stud that is inserted into the front leg of the chair and held in place by a ¼” X 1 ½” bolt through the front leg of the chair.

Steps:

1. Tip the chair forward so that the chair is lying on its front with the back wheels up in the air.

2. Remove the nut from the ¼” bolt located on the front leg of the chair just above the caster.

3. Remove the bolt from the front leg by sliding it out of the hole.

4. Pull the old caster out of the front leg of the chair.

5. Insert the new caster into the front leg of the chair being careful to make sure the bolt hole in the stud of the caster lines up with the bolt hole in the front leg of the chair.

6. Reinsert the bolt into the hole on the front leg of the caster.

7. Reinstall the nut onto the above bolt and tighten.

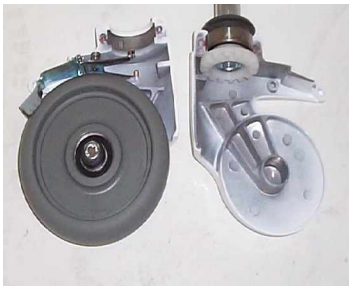
Brake Pedal Removal and Installation Instructions

Steps:

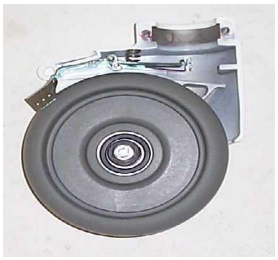
1. Remove the caster from the chair as per above Removal and Installation instructions.

2. Remove the grey rubber dust boot from the top of the caster by prying up on the bottom edge of the dust boot between the dust boot and the white housing, this may take bit of effort, as they are quiet tight sometimes.

3. Remove the Allen screws that hold the two halves of the caster together. These Allen screws are located one side of the caster at the top.



4. Pry the two halves of the caster apart. Be careful to observe where all the various parts are install and try not to knock any of them out of place.



5. Lift the old brake pedal out of the housing.

6. Place the new brake pedal into the rear of the housing above the silver colored brake shoe. Make sure that the round tab on the brake pedal is inserted into the round hole at the rear of the caster housing and the wide end of the pedal is sticking out the back of the caster. The same as the old brake pedal.

7. Reinstall the other half of the housing. Be careful to make sure that the pins on the brake shoe and the brake pedal are lined up with the appropriate hole.

8. Reinstall and tight the Allen screws.

9. Reinstall the rubber dust boot. Make sure the flats on the inside of the dust boot are lined up with the flats on the side of the caster housing.

10. Reinstall the caster onto the chair as per above Installation instructions.

6” Single Directional Locking Caster

(applies to current and non current models)

Maintenance and Repair:

These casters are designed to be maintenance free. The bearings in these casters are permanently lubricated and should not require further lubrication. There are no adjustments or repair for this caster. Should the caster become defective, it must be replaced.

Replacement Instructions:

This caster has a stem that is inserted into the rear leg of the chair and is held in place by two mounting bolts located above the caster on the front and rear of the rear leg of the chair. The caster functions are controlled by pedals mounted on each side of the chair at the rear. These pedals control the function of casters at the same time and are mounted on a hexagonal shaft that run through the frame of the chair from one side to the other and are held in place by set screw located on the underside of the pedal. These casters must be synchronized with each other during installation as per the following instructions.

Steps:

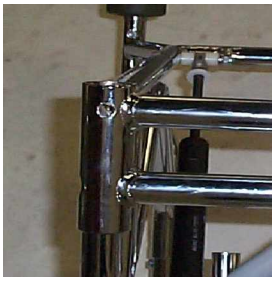
1. Identify the caster that is not functioning properly.

2. Adjust the pedal so that the caster, which is still fully functional, is locked in the directional lock mode (the caster s locked from rotating and is trailing behind the chair and the wheel still spins).

3. If applicable, remove end caps on the end of the hexagonal shaft (in the middle of the pedal) Use a 3mm Allen-wrench to loosen the setscrew in the pedal beside the caster you are replacing. Remove the pedal from the hexagonal shaft. Check to make sure there are no burrs on the shaft where the pedal was secured. If there are burrs present use a file to remove them before proceeding to the next step.

4. Use a 13mm wrench to remove the mounting bolts that secure the faulty caster.

5. Slide the hexagonal shaft out of the frame of the chair approximately 6”, on the side with the pedal still attached (next to the good caster).



6. Remove the faulty caster from the chair.

7. Holding the stem of the replacement caster in one hand determine if it is set in the directional lock mode (the caster housing should not rotate around the stem but the wheel still spins). If so skip to step 10.
8. Set the caster in the directional lock mode. By inserting a large flat blade screwdriver into the hexagonal hole located in the caster stem and rotating counter clockwise, when viewing the caster with the blue side of the stem facing towards you, until it clicks. The head of a ¼" bolt will fit in the hexagonal hole and it can be held and rotated with a pair of locking pliers.

9. Hold the stem of the caster and swivel the caster housing until the directional lock engages. The caster won't swivel but the wheel still rotates in the fork.

10. Install the caster in the chair frame with the wheel trailing **behind** the chair the same as the other caster.

11. Reinsert the hexagonal rod through the new caster (a gentle tap may be required here).

12. Reinstall and tighten the mounting bolts (the use of Lock-Tite is recommended).

13. Reinstall the pedal removed in step 3 and tighten the setscrew. Insert new caps on the hexagonal shaft (in the middle of the pedal)

    *Please note that after the end caps have been removed from the chair, they must be replaced with new ones. They are NOT reusable

6” and 8” Multi Directional Lock Caster

Maintenance and Repair:

These casters are designed to be maintenance free. The bearings in these casters are permanently lubricated and should not require further lubrication. There are some adjustments that can be done on this caster. The brakes can be adjusted to compensate for wear and the casters can and be resynchronized if they become unsynchronized.

Removal and Installation

This caster has a stem that is inserted into the rear leg of the chair and is held in place by two mounting bolts located above the caster on the front and rear of the rear leg of the chair. The caster functions are controlled by pedals mounted on each side of the chair at the rear. These pedals control the function of casters at the same time. They are mounted on a hexagonal shaft that run through the frame of the chair from one side to the other and are held in place by set screw located on the underside of the pedal and a chrome end-cap. These casters must be synchronized with each other during installation as per the following instructions.

Steps:

1. Identify the caster that needs to be replaced.

2. Adjust the pedal so that the caster, which is not being replaced, is locked in the directional-lock mode (the caster is locked from rotating and is trailing behind the chair and the wheel still spins).

3. Remove the end-cap from the hex shaft by placing a flat blade screwdriver between the pedal and the end-cap and prying.

4. Use a 3mm Allen-wrench to loosen the setscrew in the pedal beside the caster you are replacing. Remove the pedal from the hexagonal shaft. Check to make sure there are no burrs on the shaft where the pedal was secured. If there are burrs present use a file to remove them before proceeding to the next step.

5. Use a 13mm wrench to remove the mounting bolts that secure the faulty caster.

6. Slide the hexagonal shaft out of the frame of the chair approximately 6”, on the side with the pedal still attached (next to the good caster).

7. Remove the faulty caster from the chair.

8. Holding the stem of the replacement caster in one hand determine if it is set in the directional lock mode (the caster housing should not rotate around the stem but the wheel still spins). If so skip to step 10.
9. Set the caster in the directional lock mode. By inserting a large flat blade screwdriver into the hexagonal hole located in the caster stem and rotate it until you hear a click (the head of a ¼" bolt will fit in the hexagonal hole and it can be held and rotated with a pair of locking pliers).

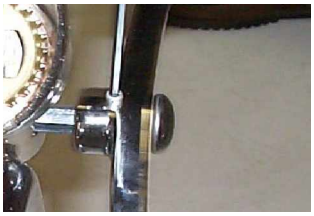
10. Hold the stem of the caster and swivel the caster housing until the directional lock engages. The caster won't swivel but the wheel still rotates in the fork.

11. Install the caster in the chair frame with the wheel trailing **behind** the chair the same as the other caster.

12. Reinsert the hexagonal rod through the new caster (a gentle tap may be required here).

13. Reinstall and tighten the mounting bolts (the use of Lock-Tite is recommended).

14. Reinstall the pedal removed in step 3 and tighten the setscrew.



15. Install new end-cap.

16. Check for proper function. If the casters are not synchronized refer to the following instructions on re-synchronizing the casters.

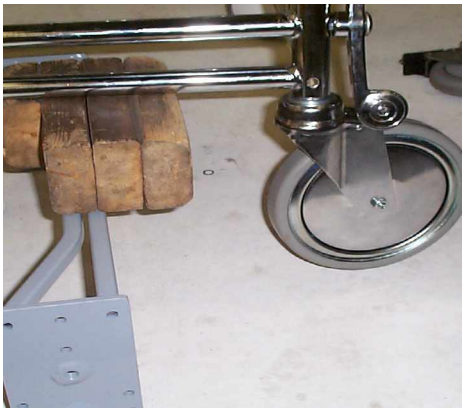
Re-synchronizing

Steps:

1. Identify the caster that is not functioning properly (the mounting bolts are probably missing from the problem caster). If both casters are malfunctioning skip to step 3 do one caster and then repeat for second caster.

2. Adjust the pedal (the rear part of the pedal is in the down position) so that the caster that is still functioning is in the directional lock mode (the caster won't swivel but the wheel still spins) with the wheel in the trailing position.

3. Use a prop to elevate the rear of the chair so that the wheels are off the floor.



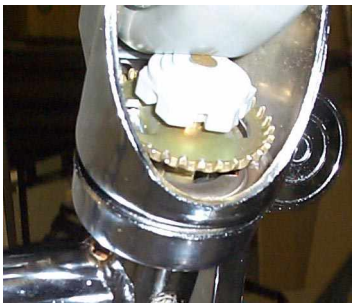
4. Rotate the problem caster counter clockwise until it will no longer rotate (do not force once resistance is felt).
5. Rotate the caster clockwise six full turns.

6. Install the two mounting bolts (finger tight only at this time). If doing both casters return to step 1 and proceed with the second caster now.

7. Remove the prop elevating the chair off the floor.
8. Check the function of the casters. If the casters are synchronized tighten the bolts with a 13mm wrench. Check the bolts in the other caster to make sure the bolts are tight.
9. If one of the casters is still not functioning properly remove the two mounting bolts and rotate the caster counterclockwise one more full turn.
10. Reinstall and tighten the mounting bolts.

Brake Adjustment

Steps:



1. Tip chair forward so that the rear casters are elevated. Inside the housing above the wheel you will see a hexagonal plastic brake shoe with slots in it.

2. Insert a flat blade screwdriver into the slot.
3. Turn the brake shoe counter clockwise one half turn.

4. Test the brake. Repeat step 3 until desired brake pressure is achieved (caution over adjustment could result in tire or brake damage).

Gas Cylinders

The use of gas charged springs on Broda products allow the caregiver to easily make adjustments to the tilt, recline, and leg rest with a minimum amount of effort. The gas cylinders contain Nitrogen gas, it is not flammable nor is it toxic. The cylinders provide a lifting force of 300 Newtons (approx. 68Lbs). In other words the cylinders reduce the amount of weight the care giver has to lift by 68Lbs.

Part No.	Description	Where Used
Part No. PRT-PAB4	300N locking gas cylinder with a nine inch long body	Used for the seat tilt on pedal chair, (48) full recliner (785) and tilt and recline for Commode/Shower chair (385)
Part No. PRT-PAB4 (NL)	300N non-locking cylinder, with a nine inch long body	Used for the tilt and recline on the CS 385, and since Sept 8 2001, for the tilt on the 785
Part No. PRT-PAB5	300N locking gas cylinder with a eleven inch long body	Used for the leg rest on all models. Used for back recline on all reclining models except the CS 385. and for the tilt on the 75V, 35V, 85V, 30VT, and 80V.
Part No. PRT-PAB5 NL	300N non-locking gas cylinder with an eleven inch long body	Used for the tilt on the 785 prior to Sept 8, 2001, and previous model 885 as the right hand tilt cylinder.

How do they work?

On the end of the stem of the cylinder is a small pin. When the operator depresses the Handle this pulls on the cable which in turn pulls on a small lever inside the actuator mechanism into which the stem of the cylinder is mounted. This depresses the pin, which in turn opens a valve located inside the barrel of the cylinder. This allows for changes in position. When the operator releases the handle the valve closes and locks the cylinder in the desired position.

Over the years Broda has used many different types of actuators to operate the gas cylinders used on our products. Although they may look different their function is one and the same (to push against the pin and open the valve that controls the cylinder). If the cylinder is not properly adjusted when mounted in the actuator, the cylinder may not function properly.

Maintenance

The gas cylinders do not require any maintenance, although they may need to be adjusted due to wide temperature variations or cable stretch.

When adjusting the cylinder it is important that you do not damage the stem on the cylinder. Small scratches left by applying the jaws of pliers or Vice Grips directly to the shaft while making adjustments will destroy the seal and allow the gas inside the cylinder to escape. Use a piece of vinyl strapping or rubber to protect the cylinder shaft from the jaws of the tool you are using to make the adjustments!

Trouble shooting for cylinders

Often when experiencing problems with cylinders on Broda chairs, the cylinder is not bad, it just needs adjustment. There are two common adjustments.

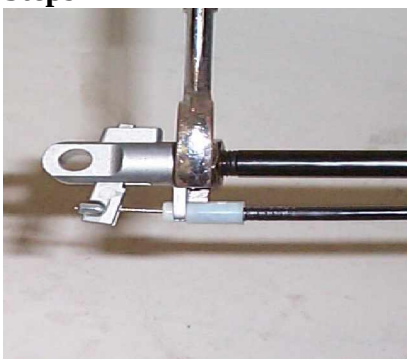
1. The pin that the cable handle pulls on at the end of the cylinder is not connected correctly.
2. Or the handle or cable assembly have become broken or disconnected.

The cable mechanism works exactly like a bicycle brake and is easy to check when experiencing problems.

Other solutions to common problems are listed below.

1. **Chair is not reclining or tilting when cylinder handle is pulled.**
   a. The pin in the end of the cylinder is not being depressed when the handle is pulled.
   Action to take: See adjustment steps
2. **The chair seems to slowly slide out of position**
   a. The pin in the end of the cylinder may be still partially depressed.
   Action to take: See adjustment steps.

Adjustment Steps



Note: Cylinder does not need to be removed from the chair to make this adjustment.

1. Loosen the lock nut located on the stem of the gas cylinder next to the actuator (17mm or 11/16" wrench).
2. From the above instruction determine whether you want to wind the stem further into the actuator or further out of the actuator. You will need to wind the stem further into the actuator if the chair is not tilting or reclining, (wind it clockwise) and wind it further out of the actuator if the chair is slowly sliding out of position. (wind it counter-clockwise)

Note: When adjusting cylinders with tools that come in contact with the cylinder rods. A cloth, piece of vinyl strap, or some other protective material must be used to protect the sliding surface of the rod. If the rod becomes scratched or scarred it will puncture the seal on the cylinder and the cylinder will fail.

Damaging a cylinder in this fashion voids the manufacturers warranty.

3. Wind the stem in the correct direction one half turn. When viewing the cylinder with stem pointing towards you turn the stem clockwise to wind the stem out of the actuator and counter-clockwise to wind the stem into the actuator.

4. Check the function of the cylinder and repeat steps 3 & 4 until the cylinder functions properly.
5. Tighten the lock nut loosened in step 1.

   If adjusting the cylinder does not correct the problem, the cylinder may need to replaced.

Removal and Installation

Steps

Old (left) and new (right) actuators respectively

1. Remove the 5/16” mounting bolt from the end of the cylinder (requires 2 x ½”” wrenches).

2. Loosen the lock nut located on the stem of the cylinder by the actuator.

3. Wind the stem of the cylinder out of the actuator.
4. Wind the stem of the new cylinder into the actuator.

5. Reinstall the 5/16” mounting bolt.

6. Adjust the cylinder as per the above adjustment instructions.

Installing an Actuator

1. Hold the small pin in your right hand, with the long flat side, and the “u” cut out pointing upward.
2. Hold the head of the actuator in your left hand with the tail portion pointing to the right and the rounded head pointing up
3. Slide the small end of the pin through the hole, bringing it through just until it becomes flush with the side of the actuator

4. Holding the pin in place, wind the cylinder into the actuator, making sure the pin stays in place at all times

5. Tighten the actuator on the cylinder until the pin reaches the top of the hold in the actuator.
6. Using a wrench, tighten the bolt that will be located just underneath the attached actuator

Seat Depth Extension Models 35V, 75V, 85V, 80V, and 30VT

Note: Please call factory at 1-800-668-0637. When attempting a Seat Depth Extension. Please have serial number of chair you are working on.

Steps:

1) Remove the front strap from the seat by cutting the strap and drilling out the rivets that hold it in place with a 3/16" drill.

2) Detach the gas cylinder from the leg rest by removing the bolt that fastens the front of the cylinder to the leg rest. Requires two half inch wrenches. The cylinder is located on the left-hand side of the chair as seated in the chair.

3) Detach the leg rest from the front of the seat by removing the pivot bolts that fasten the leg rest to the seat. Requires two half inch wrenches.

4) Remove the two chrome seat plugs from the front of the seat frame (one on each side of the seat).

5) Install the two new seat extension plugs and secure them to the seat frame with the ¼" x 1 ¼" fasteners supplied. **Make sure the rivet holes on the seat extension plug are on the outside when the plugs are installed.**

6) Reinstall the leg rest using the fasteners that were removed in step 3.

7) Install the cylinder extension bar (fcp-pabbar) onto the cylinder by sliding it on over the cylinder with the forked end towards the front of the chair and bolting in the appropriate hole. Use the fourth hole from the end of the fork for a three inch seat extension and the third hole from the end for a 1 ½" seat extension. **The holes in the fork are offset to one side. The extension bar should mounted with this side upwards.** Use a 5/16" x 2 ¼" Long bolt to attach extension bar to cylinder.

8) Attach the front end of the extension bar to the leg rest with a 5/16" x 2 ¼" long bolt and appropriate spacers to keep the cylinder running straight.

9) Install new straps on seat extension plugs. Refer to strap installation instructions.

Seat Depth Extension for model 785 &
Mounting Seat and Legrest for model 785

1 - 2 ½ " BOLT (5/16" in diameter)
2 - 1 ½" BOLT (5/16" diameter)
6 - 1 ¾" BOLT (5/16" diameter)
3 - 2" BOLT (5/16" diameter)
1 - 2 ¼" BOLT (5/16" diameter)
2 - 2 ½" BOLT (1/4" diameter)
1- 2 ¾" BOLT (5/16" diameter)
2 - 3" BOLT (5/16" diameter)
2 - 3 ¼" BOLT (1/4" diameter)
4 – 3/8" PLASTIC SPACER
2 - ½" PLASTIC SPACER
10 - ¼" PLASTIC SPACER
12 - 1/8" PLASTIC SPACER
2 – PLAIN NUTS (5/16")
2 – ACORN NUTS (5/16")
4 – LOCK NUT (1/4")
2 – BLACK PLASTIC PLUG (1/4"passhole)
1 – BLACK PLASTIC PLUG (5/16" passhole
14 - LOCK NUT (5/16")
9 - METAL WASHER
1 – PAB4 (WITH ACTUATOR)
1 – PAB4NL
1 – PAB5 (WITH ACTUATOR)
1 – PAB5 (LEGREST CYLINDER)
1 – 3" STEEL PLUG
2 – EXTENSION BARS
2 – ATTACHMENT RODS *
1 – J-LEVER
1 – ELEVATION TUBE
1 – ELEVATION ROD *
3 – CABLE & HANDLES
2 – ¼" SPLIT LOCK WASHER
4 – 5/32" PLASTIC SPACER

*** are for a 785 seat depth extension**

*** are size specific, depending on a depth change of 18.5" or 20".**
1 ½ inch rods are needed for 18.5" depth.
3 inch rods are needed for 20" depth.

- When referring to Left & Right sides of the chair it is while in a seated position.

- Please note spacers and bolts may be interchanged with different sizes to match the manufacturing of the chair.

1. On the **base** of the **chair** locate two holes (one on each side) on the bottom bar of the **base** found just behind the front horizontal bar. Using 3" bolts attach the **PAB4**, & **PAB4NL cylinders** to the **base** of the chair. The **PAB4 cylinder** goes on the right side of the **chair**, and the **PAB4NL** goes on the left side. For each side place the 3" bolt through the hole in the frame (facing inward), followed by 1/2" plastic spacer, then a ¼" plastic spacer followed by the **cylinder** (actuator end with the actuator pin pointing up), place another ¼" plastic spacer, and thread bolt through the connecting tab on the chair, tighten with a nylon lock nut.
2. Put a ¼" black plastic plug in the vertical post on the front part of the **base** on both sides.
3. The front of the **seat** then gets attached through the plugs that were inserted in the front legs. Using 3 ¼" bolts thread from the outside through the base followed by the ¾" post on the **seat** and tighten with a lock nut.

4. Take the **seat** and attach it to the two **PAB4** that were just attached to the base. The **cylinders** get attach to the back of the **seat** on both sides where a half loop is located.
5. Use a 1 ¾" bolt, thread the bolt starting from the outside through the chair loop. Place a 1/8" plastic spacer on the bolt followed by the **cylinder**, then put a 3/8" plastic spacer on and put the bolt through the chair loop and tighten with a lock nut.
6. The **PAB5** for the recline will then be attached. This will get attached to the back middle portion of the seat. Using a 1 ¾" bolt thread the bolt from the right side through the chair tab, putting a ¼" plastic spacer on the bolt. Then attach the **cylinder** by the actuator end, having the pin face inwards. Place another ¼" plastic spacer on the bolt followed by the tab on the chair, tightening with a lock nut.
7. At the back left of the 785, insert a 3" steel plug in the bottom left vertical post, and a 5/16" black plastic plug in the bottom right. Make sure the holes match up to the back so bolts can be inserted. Some force may need to use to put this in.
8. Using 2 ½" (1/4" diameter) bolts attach the **chair back** to the **seat**. Use the holes directly below the last strap to attach it to the **seat**. Put the bolt through the **seat** from the outside followed by a 5/32"" plastic spacer, then the **chair back**, put a split lock washer on next and tighten with a lock nut.
9. Finish attaching the **recliner cylinder** to the middle bar on the back. Do so by using a 1 ¾" bolt through the right side of the chair tab putting a ¼" plastic spacer on, and then the **cylinder**, followed by another ¼" plastic spacer. Continue by putting the bolt through the left tab on the **chair** and tighten with a lock nut.
10. On both sides of the chair use a 2" bolt and place through the bottom hole of the **back**, the bolt will travel through the plug that has been put in. After putting the bolt through the back (from outside in) put a 1/8" plastic spacer on followed by the **extension bar** and another 1/8" plastic spacer, tighten with a lock nut.
11. * Apply a little bit of grease to the **attachment rods**. From the inside out place them through the tubes located on both sides of the seat. They will be found underneath the front horizontal bar. The "T"'s on the top of the attachment rods needs to be facing up in order to be attached to the bars under the seat.
12. On the left side of the chair, use a 2" bolt then a 1/8" plastic spacer and, thread the bolt through the **extension bar**. Place a metal washer on the bolt and then **attachment rod**, another metal washer on the bolt and tight with a lock nut.
13. Next on the right side of the chair use a 2 ¼" bolt with a 1/8" plastic spacer. Put this through the **extension bar**, followed by a metal washer, then the **attachment rod** with another metal washer, next attach the **J-Lever** onto the bolt, (with the "J" facing toward the chair). Put another 1/8" spacer on and tighten with a lock nut.
14. Attach the **legrest cylinder** (PAB5) next. This should have the bolt with the correct spacers on it already. However if it does not, use a 1 ¾" bolt with a 1/8" spacer, then through the **cylinder**, followed by ¼" spacer and a nut. Using a 1 ¾" bolt place a 1/8" spacer, on and place through the **"J" lever**. Then put a 3/8" spacer on the bolt, along with the actuator end of the **cylinder** (pin facing upward). Put another 1/8" spacer on the bolt and tighten with a lock nut.
15. Attach the **elevation tube** using a 2 ¾" bolt. Thread the bolt through the 3" plug (outside – inward) that was inserted on the bottom of the back on the **left** side. Next place a ¼" spacer on the bolt followed by the **elevation tube**, and then tighten with a lock nut.
16. Next attach the **legrest** by using 1 ½" bolts. The bolts will thread through the top hole of the "V" (flange) on the **legrest** (outside-inward). Place a washer on each bolt followed by the **attachment rods**, then a 5/32" plastic spacer for each and tighten with an acorn nut.
17. On the left side attach the **legrest cylinder** to the bottom hole on the "V" (flange) part of the **legrest**. Using a 1 ¾" bolt and a 1/8" plastic spacer thread it through the **cylinder** (inside-outward). After the

cylinder place a ¼" plastic spacer on the bolt along with a nut (may already be assembled, refer to step14). Thread the bolt through the bottom hole of the **legrest** and tighten with a lock nut.

* 18. Grease the **elevation rod**.
* 19. Put the **elevation rod** into the **elevation tube** on the right side.
* 20. On the right side attach the **elevation rod** in the top hole of the "V" on the **legrest**. Thread a 2 ½" bolt (inside-outward) with a washer on it through the **elevation rod**, followed by another washer. Place a 3/8" plastic spacer on the bolt next, followed by another metal washer and nut. Put the bolt through the **legrest** and tighten with a lock nut.
21. Attach the **cable/handles** to the tilt, recline and **legrest cylinders**. The **legrest cable/handle** gets attached to the left side of the chair in the hole on the diagonal bar on the base (handle facing towards the front). The **cable** will need to be fed carefully from one side of the chair to the other as it attaches to the **cylinder** on the right side. In doing this please make sure that the **cable** does not interfere with any other parts on the chair. If necessary use plastic cable ties to attach the cable to the frame.

Vinyl Straps

Maintenance

The only maintenance required for the vinyl straps is general cleaning with an ammonia or chlorine based cleaners (Do Not use petroleum based cleaners).

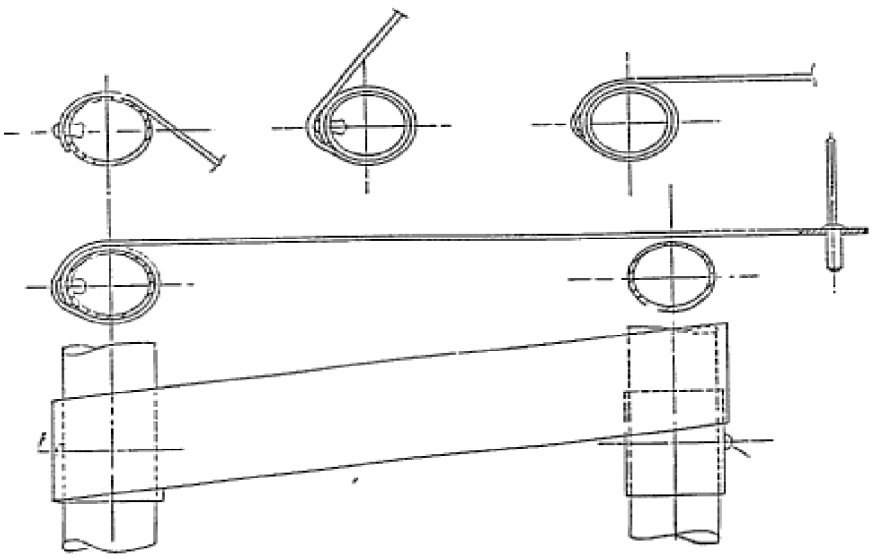
Installation/Replacement Instructions

The vinyl strapping has both elasticity and memory retention this allows each strap to conform to the resident as an independent unit. Occasionally a strap may lose memory or be cut. This makes it necessary to replace them. These straps are installed under tension this is done by heating the straps so that they are soft and pliable and this enables them to be easily stretched during installation. They are held in place by riveting them to the steel frame of the chair and then wrapping them around the frame over the top of the rivet. This is done the same for both ends of the strap.

Steps:

1) Remove the old strap by cutting it in two and drilling out the rivets with a 3/16" drill bit.
2) Heat the strap either by placing it in a pot of boiling water for a couple of minutes or by laying it out and heating it with a heat gun.
3) Rivet one end of the strap with a 3/16" diameter 3/8" long rivet, through the precut hole in the end of the strap to the frame with the crowned side of the strap up (shiny side).
4) Wrap the strap around the frame, over the top of the rivet.
5) Stretch the strap and wrap it around the other side of the frame next the rivet hole (do not cover the rivet hole with the strap).
6) Rivet the other end of the strap, through the precut hole in the end of the strap to the frame.
7) Stretch the strap and move the offset strap over to cover the rivet.

Note: If the strap cools off during the installation you can reheat it with a heat gun.



Replacement Strap Lengths

24” WIDE CHAIRS (CROSS WEAVE)

SEAT (top 2)	25 ½”
SEAT (bottom 8)	56”
BACK (top 9)	25 ½”
BACK (bottom 7)	55”
F-SD (bottom straps)	15 ½”
F-FD (bottom straps)	23”
F-SD/F-FD (calf straps)	24 ½”
LEGREST	25 ½”
LEGREST (top strap)	26 ½”

22” WIDE CHAIRS

SEAT	24 ½”
BACK (top 10)	24 ½”
BACK (bottom 7)	23 ½”
F-SD (bottom straps)	15”
F-FD (bottom straps)	22”
F-SD/F-FD (calf straps)	23 ½”
LEGREST	24 ½”
LEGREST (top strap)	25 ½”

20” WIDE CHAIRS

SEAT	23 ½”
BACK (top 10)	23 ½”
BACK (bottom 7)	22 ½”
F-SD (bottom straps)	14 ½”
F-FD (bottom straps)	21”
F-SD/F-FD (calf straps)	22 ½”
LEGREST	23 ½”
LEGREST (top strap)	24 ½”

18” WIDE CHAIRS

SEAT	22 ½”
BACK (top 10)	22 ½”
BACK (bottom 7)	21 ½”
F-SD (bottom straps)	14”
F-FD (bottom straps)	20”
F-SD/F-FD (calf straps)	21 ½”
LEGREST	22 ½”
LEGREST (top strap)	23 ½”

16” WIDE CHAIRS

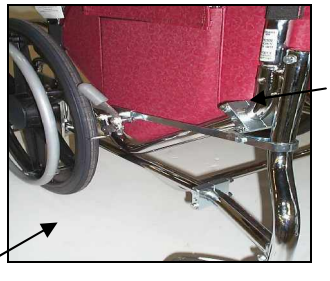
SEAT	21 ½”
BACK (top 10)	21 ½”
BACK (bottom 7)	20 ½”
F-SD (bottom straps)	N/A
F-FD (bottom straps)	19”
F-SD/F-FD (calf straps)	20 ½”
LEGREST	21 ½”
LEGREST (top strap)	22 ½

Oxygen Tank Holder

Installation instructions

Installation time:	**10 minutes**
Tools required:	**1 – ½" wrench**
	2 – 7/16" wrenches

1. Choose desired location on chair frame for mounting clamps. (**Please note: certain locations may hinder the functions of the chair i.e. elevating leg rest, swing away arm rests, back recline, seat tilt.)**
2. Remove center bolts that secure clamps to the tank cage. (Note placement of washers and spacers before disassembling)
3. Remove bolts that secure clamp pieces together.
4. Position clamps around tubular frame of chair at desired location.



5. Using the two 7/16" wrenches, tighten the bolts that will secure the clamps around the chair frame with threaded hole facing outward.
6. Install the 5/16" bolts removed in Step 2 through the slots in tank cage and using ½" wrench secure cage to clamp block installed in Step 4.
7. Insert oxygen tank and use hand wheel to secure.

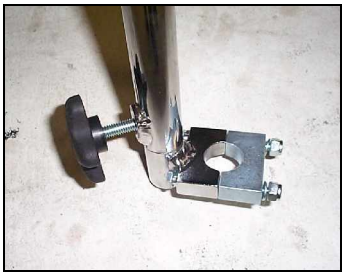
BRODA does not recommend the use of this accessory with other manufacturer's products

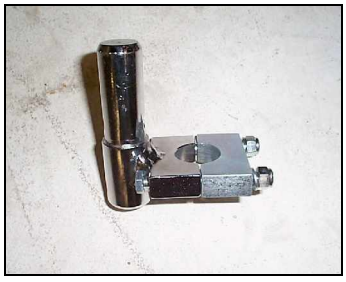
Broda IV Pole Installation Instructions

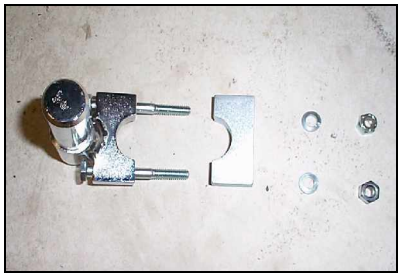
1) Choose the desired location on the chair for mounting the IV pole clamps. They can fit around any vertical part of the chair frame. **(Please note: certain locations may hinder functions of the chair ie. back recline, seat tilt)** On most chairs, the IV pole is installed on the rear of the chair, near the caster. On chairs with mag wheels, it is installed on the front of the chair.

2) Turn the handle at the bottom of the pole to loosen and release the clamp that fits inside the pole, so the clamp can be attached to the chair.

3) To attach clamp to the chair, remove the bolts from the clamp, so it is now in two pieces. It can now be fitted to the desired location on the chair frame.







4) Place clamps around desired location of the chair frame, with the part of clamp with the tubular shape to the outside of the frame.

5) Using two 7/16” wrenches tighten the bolts that will secure the clamps around the chair frame.

6) Once secured, the IV pole is attached by fitting it back over the tubular shaped part of the clamp, and tightened by turning the handle. **(Broda does not recommend use of this accessory with other manufacturer’s product)**

Suggested Maintenance of Broda Chairs

The following pertains to the maintenance of Broda chairs when used according to the Broda Operating Instructions and Cleaning Instructions (See Operating manuals for further details)

The maintenance cycle of Broda chairs may vary due to the following factors: how often the chair is used, the manner in which the chair is used and the condition of the resident in the chair (Patients of a more aggressive nature may contribute to more wear on the chair. This may call for more frequent observation of the chair.)

We do recommend regular visual inspection for signs of wear, damage, loose or missing fittings, and other safety concerns. Also, periodic testing of the chairs functions is appropriate. If a breakage, defect, or operational problem is detected, the chair must be repaired, inspected and tested for function before it is returned to service. In regular use, after the initial inspection and functional testing, the chair should be inspected and tested on bimonthly basis. The chair should be inspected and tested as often as each use if the chair is used

1) By aggressive or agitated residents
2) By residents who have involuntary movement
3) On irregular or sloped surfaces
4) By residents weighing over 90 kg (198 lbs)
5) By any unauthorized person

Do not use any lubricants that contain solvents. Solvents will damage many of the moving components of the chair. Do not use spray lubricants, as they contain solvents

Suggested Maintenance of Particular Parts

Vinyl Straps

Maintenance required for the vinyl straps is general cleaning with ammonia or chlorine based cleaners. (One parts cleaner and four parts water) Do not use petroleum based cleaners as they may break down the vinyl. If any strap is showing nicks or cracking, replace it immediately.

Padding

Maintenance required for vinyl padding is general cleaning with ammonia or chlorine based cleaners. (One part cleaner and four parts water) Do not use petroleum based cleaners as they may break the vinyl down. Seat and back pads can be wiped down with the same solution. The terri cloth covers on the seat and back pads can be washed with regular laundry.

Chair Frame

Maintenance required for the chair frame is general cleaning by wiping the chair down with a damp cloth. Occasional tightening of nuts and bolts may be required depending on the wear of the chair. (Pay particular attention to the legrest and footrest area) Broda suggests that they be checked on a quarterly basis. Broda does not suggest Basic, Pedal or Elite Chairs be used in a shower, as this may

cause the frame to rust and will void the warranty. A Broda Shower/Commode Chair is recommended for showers as it's made of stainless steel.

Tente Casters

These casters are designed to be maintenance free. They do not have individual parts to be replaced. bearings in the casters are permanently lubricated and should not require further lubrication. If needed, the entire caster will be replaced as opposed to the individual components.

Gas Cylinders

The gas cylinders do not require any maintenance. They may need to be adjusted due to wide temperature variations or cable stretch. Occasional adjustments may also be required depending on the wear of the chair.

Cables and Handles

The cables and handles do not require any maintenance.

Conversions and Retrofitting

Conversion of an Elevating Legrest to a Contracture Sling

Most likely, you will receive all the parts assembled together from Broda. You will have to unscrew the small screw and spacer at the front of the rod to remove the sling in order to assemble it to the chair. You will need to keep these screws and spacers as they are required for the final step of assembly. In the event that the parts you have received are not already assembled, you will need to place the pad on the sling hoop. See below for instructions.

1. Remove the existing legrest, including the cylinders and all hardware.

2. Drill two holes in the base, ¼" in diameter on the vertical arm rest socket at the rear of the chair. Place the hole about ¾" above the horizontal bar.

3. Using the hardware provided, attach the sling rods to the base.

4. Slide one sling ring on each rod and push all the way to the back of the chair. These are the parts with the thumb screw attached. Make sure the ring is loose enough to move along the rod.

5. Attach the sling hoop to the rod using the sling clips ("U" type part). There are holes towards the middle and back of the hoop to attach these to. Make sure the clip goes around both the rod and the hoop as this is what aids the contracture sling to move back and forth.

6. Slide the other two sling rings on the rod, one on each side, and attach the small screw and white spacer into the underside of the sling rod at the front.

Attaching the pad to the hoop

- Slip the hoop through the front and larger opening of the pad and attach the flaps around the hoop with the elastic strapping.

- Insert the plastic covered rod through the smaller opening at the back of the pad.

- Attach the rod to the hoop by inserting it into the holes and tightening the nut provided.

Changing from Contracture to Elevated Legrest

The first step is to remove the sling footrest.

1. Remove the 4 bolts at each of the sling clips. (There will be 4 clips)

2. Pull out the sling frame completely.

3. Remove the bolts at the back of the chair that secure the sling rails to the base frame.

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4. Remove the rails.

The second step is to install the elevating legrest.

1. Remove the front strap of the seat by cutting the strap

2. Remove the rivets. Use a hammer, if necessary, to shear off the rivet, or drill them out with a 3/16" diameter drill bit.

3. Remove the black plugs that are inserted into the front of the seat frame sockets by prying them out with a screwdriver. You may find it easier to remove them by hammering a screwdriver through the center of the plug, and twisting them out.

4. Insert the black plastic reinforced seat plugs. Ensure that the hole on the frame and the hole on the plug line up properly to insert the bolt for the legrest.

5. Insert the bolts and spacers provided, in the order you received them. (all complete legrest assemblies will come already partially assembled, with all the bolts and spacers in their proper place.)

6. Attach the legrest to the chair, and tighten all bolts.

The third step is to attach the cylinder to the legrest.

Where it is attached to the legrest varies with the model. There is a "V" with three holes in it on the legrest. (see diagram A.)

1. The cylinder is attached in the bottom hole for both an 85V and 80V, the middle hole for the 35Vand 30VT. The top hole is used for the 785 and 75V, which is never supplied with a contracture sling.

2. Make sure the actuator is angled downward with the arm of the actuator facing the floor. Tighten the screw at the legrest.

3. Attach the cylinder to the base, for an 85V/80V, using the hole provided about ½ way from the front of chair on the lower side rail of the base. For a 35V/30VT, attach to the left side at the

bottom back of the seat using the black, reinforced seat plug, inserted into the bottom of the chair back. Bolt the cylinder through the plug and actuator.

The fourth step is to attach the handle and cable.

1. Mount the handle to the base with the handle pointing to the back and facing down using the hole provided.

2. Make sure the cable is on the inside of the chair base and run it between the legrest cylinder and the base.

3. Attach the cable to the actuator and, using a plastic tie, tie it to the cross bar of the seat. Pull it tight and cut off the excess tie.

The fifth step is to replace the strap that was cut off.

1. Cut a notch in the strap, approximately 1" long and ½" deep at 1" from the end of the strap. This allows for the strap to go around the bolt.

2. Rivet the strap to the chair following the directions for replacing a strap.

3. Cover the bolt ends for safety.

How to Retrofit an Old Style Jorgensen Unit with a New Style Cylinder (Legrest Only)

The first step is to remove the old style cylinder and its attachments. Unbolt the existing bolt and pipe at the front of the chair that is attached to the legrest. Unbolt the clamp at the back of the chair.

1. Insert the black plug into the back frame at the bottom left side of chair.

2. Hook the back end of the cylinder, the one with the actuator, using the screws and spacers provided into the black plastic insert.

3. Attach the front end of the cylinder to the flange on the legrest (the V-shaped chrome piece with three holes in it). Attach it in the top hole of the flange for the 75V and the 785, the middle hole for the 35V and the bottom hole for the 85V. (models may vary, check with customer service before ordering the parts)

4. Attach the handle to the base of the chair. You will need to drill a 3/16" hole into the frame for the mounting screw which is a #8, 1 ½" screw.

5. Attach the actuator to the cylinder. You will need to secure the cable under the chair. You may want to wind it around the base underneath so it won't get caught on anything.

6. Follow instructions on adjusting the actuator in the Repair and Maintenance Manual.